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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/714,820	11/17/2000	Toshimi Fukui	50059-052	5269

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EXAMINER

DOUGHERTY, THOMAS M

ART UNIT PAPER NUMBER

2834

DATE MAILED: 06/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/714,820

Applicant(s)

FUKUI, TOSHIMI

Examiner

Thomas M. Dougherty

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 10-13 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,4 and 7-9 is/are allowed.
- 6) ☒ Claim(s) 2,5 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Applicant's arguments filed 05/28/02 have been fully considered but they are not persuasive enough to overcome the reasons for the restriction requirement as described in paper 7.

Claim Objections

Claim 5 is objected to because of the following informalities: 'material' is misspelled. Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claims 2, 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim 2 description reiterates that the oxide layer is expressed by ABO_3 whether it be a composite oxide or a solid solution of composite oxides. It then goes on to indicate what the options for A and B are. However "a composite oxide b" is then noted which likewise has the form of ABO_3 and the possible materials of this A and B are likewise noted. This composite oxide is understood to be the solid solution of composite oxides noted in claim 1. Then the claim goes on to note "said composite oxide a". There is no previous mention of this. No proper antecedent basis has been found for it and it is not a definite description. Claim 5 notes that the piezoelectric film may be formed of mainly the composite oxide, which counters the claim 1 requirement, on which claim 5 depends, that an oxide layer, understood to be separate and different from the piezoelectric film, is between the

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piezoelectric film and an electrode. The claim 5 description appears merely to define a single piezoelectric film between electrodes without any oxide layer different from the piezoelectric film. In claim 6, it is noted that: "(Pb(C_{1/3}D_{2/3})O₃ is hereinafter referred to as "PCD", and (BA_{1-y}Sr_yTiO₃) is hereinafter referred to as "BSTO")." There is no reference to either after this declaration, for that reason, and for the sake of clarity, this fragment of the claim ought to be deleted.

Allowable Subject Matter

Claims 1, 3, 4 and 7-9 are allowed.

Claims 2 and 6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: The prior art fails to show or fairly suggest an oxide layer between a piezoelectric film and an electrode which is formed of a composite described as ABO₃.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited shows at least some aspect or aspects of the claimed invention.

Claim 5 is so indefinite that it is not known whether or not it may eventually be considered allowable. When it is made definite this consideration may be made.

Direct inquiry concerning this action to Examiner Dougherty at (703) 308-1628.

tmd
tmd

June 11, 2002

Thomas M. Dougherty
THOMAS M. DOUGHERTY
PRIMARY EXAMINER
GROUP 2100
2834